WHAT IS CLAIMED IS:

1. A fusing-station roller for use in a fusing station of an electrostatographic machine, said fusing-station roller elastically deformable, said fusing-station roller comprising:

a core member, said core member rigid and having a cylindrical outer surface;

a resilient layer, said resilient layer formed on said core member;

wherein said resilient layer is a fluoropolymer material, said fluoropolymer material made from an uncured formulation by a curing;

wherein said uncured formulation includes a fluoroelastomer;

wherein said uncured formulation includes microsphere particles, said microsphere particles having flexible walls;

wherein said microsphere particles have a predetermined weight percentage in said uncured formulation; and

wherein in addition to said microsphere particles, said uncured formulation includes solid filler particles.

2. The fusing-station roller of Claim 1, wherein a type of solid filler particles includes strength-enhancing filler particles.

3. The fusing-station roller of Claim 2, wherein said strength-enhancing filler particles are members of a group including particles of silica, zirconium oxide, boron nitride, silicon carbide, carbon black, and tungsten carbide.

4. The fusing-station roller of Claim 2, wherein said strength-enhancing filler particles have a concentration in said uncured formulation in a range of approximately between 5% - 10% by weight.

5. The fusing-station roller of Claim 1, wherein a type of solid filler particles includes thermal-conductivity-enhancing filler particles.

6. The fusing-station roller of Claim 5, wherein said thermal-conductivity-enhancing filler particles are selected from a group including particles of aluminum oxide, iron oxide, copper oxide, calcium oxide, magnesium oxide, nickel oxide, tin oxide, zinc oxide, graphite, carbon black, and mixtures thereof.

7. The fusing-station roller of Claim 5, wherein said thermal-conductivity-enhancing filler particles have a concentration in said uncured formulation in a range of approximately between 10% - 40% by weight.

8. The fusing-station roller of Claim 5, wherein said thermal-conductivity-enhancing filler particles have a concentration in said uncured formulation in a range of approximately between 40% - 70% by weight.

9. The fusing-station roller of Claim 1, wherein said microsphere particles are hollow microballoons, said hollow microballoons having at least one distinguishable size.

10. The fusing-station roller of Claim 9, wherein said hollow microballoons have diameters of up to approximately 120 μm.

11. The fusing-station roller of Claim 1, wherein said microsphere particles are unexpanded microspheres, said unexpanded microspheres being expanded to microballoons during said curing, said curing at an elevated temperature.

12. The fusing-station roller of Claim 11, wherein said microballoons are hollow, flexible, and have at least one distinguishable size.

13. The fusing-station roller of Claim 1, wherein said predetermined microsphere concentration is in a range of approximately between 0.25% - 4% by weight in said uncured formulation.

14. The fusing-station roller of Claim 13, wherein said predetermined microsphere concentration is in a range of approximately between 0.5% - 3% by weight in said uncured formulation.

15. The fusing-station roller of Claim 1, wherein said curing of said uncured formulation is a thermal curing, said thermal curing carried out at an elevated temperature.

16. The fusing-station roller of Claim 15, wherein said elevated temperature is in a range of approximately between 150°C - 200°C.

17. The fusing-station roller of Claim 15, wherein said elevated temperature is in a range of approximately between 230°C - 260°C.

18. The fusing-station roller of Claim 1, wherein said curing of said uncured formulation is an electron-beam curing.

19. The fusing-station roller of Claim 1, wherein said flexible walls of said microsphere particles comprise a polymeric material, said polymeric material polymerized from monomers selected from the following group of monomers: acrylonitrile, methacrylonitrile, acrylate, methacrylate, vinylidene chloride, and combinations thereof.

20. The fusing-station roller of Claim 1, wherein said flexible walls of said microsphere particles include finely divided particles selected from a group including inorganic particles and organic polymeric particles.

21. The fusing-station roller of Claim 1, wherein a thickness of said resilient layer is in a range of approximately between 0.005 inch - 0.2 inch.

22. The fusing-station roller of Claim 21, wherein a thickness of said resilient layer is in a range of approximately between 0.05 inch - 0.1 inch.

23. The fusing-station roller of Claim 1, wherein said fusing-station roller is a fuser roller, said fuser roller internally heated.

24. The fusing-station roller of Claim 23, wherein said thermal conductivity of said resilient layer is in a range of approximately between 0.08 BTU/hr/ft/°F - 0.7 BTU/hr/ft/°F.

25. The fusing-station roller of Claim 24, wherein said thermal conductivity of said resilient layer is in a range of approximately between 0.2 BTU/hr/ft/°F - 0.5 BTU/hr/ft/°F.

26. The fusing-station roller of Claim 1, wherein a Shore A durometer of said resilient layer is in a range of approximately between 40 - 70.

27. The fusing-station roller of Claim 26, wherein a Shore A durometer of said resilient layer is in a range of approximately between 40 - 45.

28. The fusing-station roller of Claim 1, wherein a Shore A durometer of said resilient layer is in a range of approximately between 60 - 70.

29. The fusing-station roller of Claim 1, wherein said fusing-station roller is a pressure roller.

30. The pressure roller of Claim 27, wherein a thermal conductivity of said resilient layer is in a range of approximately between 0.1 BTU/hr/ft/°F - 0.2 BTU/hr/ft/°F.

31. The fusing-station roller of Claim 1, wherein said fluoroelastomer comprises a copolymer, said copolymer made of monomers of vinylidene fluoride (CH_2CF_2), hexafluoropropylene ($CF_2CF(CF_3)$), and tetrafluoroethylene (CF_2CF_2), said copolymer having a composition of:

—$(CH_2CF_2)x$—, —$(CF_2CF(CF_3))y$—, and —$(CF_2CF_2)z$—,

wherein,

x is from 30 to 90 mole percent,

y is from 10 to 70 mole percent,

z is from 0 to 34 mole percent,

x + y + z equals 100 mole percent.

32. The fusing-station roller of Claim 1, wherein said solid filler particles have a mean diameter in a range of approximately between 0.1 - 100 μm.

33. The fusing-station roller of Claim 30, wherein said solid filler particles have a mean diameter in a range of approximately between 0.5 - 40 μm.

34. The fusing-station roller of Claim 1, wherein said fluoroelastomer in said uncured formulation is in a form of particles, said particles having diameters in a range of approximately between 0.01 mm - 1 mm.

35. The fusing-station roller of Claim 1, wherein:

a weight percent of fluorine in a formula weight of said fluoroelastomer has an upper limit of about 70%; and

a molecular weight of said fluoroelastomer is in a range of approximately between 10,000 - 200,000.

36. The fusing-station roller of Claim 35, wherein said molecular weight of said fluoroelastomer is in a range of approximately between 50,000 - 200,000.

37. The fusing-station roller of Claim 1, wherein coated on said resilient layer is a protective layer.

38. The elastically deformable fusing-station roller of Claim 37, wherein said protective layer comprises a fluoropolymer.

39. The fluoropolymer of Claim 38, wherein said fluoropolymer is a random copolymer, said random copolymer made of monomers of vinylidene fluoride (CH_2CF_2), hexafluoropropylene ($CF_2CF(CF_3)$), and tetrafluoroethylene (CF_2CF_2), said random copolymer having subunits of:

$—(CH_2CF_2)x—$, $—(CF_2CF(CF_3))y—$, and $—(CF_2CF_2)z—$,

wherein,

x is from 1 to 50 or from 60 to 80 mole percent,

y is from 10 to 90 mole percent,

z is from 10 to 90 mole percent,

x + y + z equals 100 mole percent.

40. The fluoropolymer of Claim 38, wherein said fluoropolymer is polytetrafluoroethylene.

41. For use in a fusing station of an electrostatographic machine, an elastically deformable fusing-station member, said elastically deformable fusing-station member comprising:

a substrate;

a resilient layer, said resilient layer formed on said substrate;

wherein said resilient layer is a crosslinked fluoropolymer made from an uncured formulation by a curing;

wherein said uncured formulation includes a fluoroelastomer;

wherein a weight percent of fluorine in a formula weight of said fluoroelastomer has an upper limit of about 70%;

wherein said uncured formulation includes microspheres, said microspheres having flexible walls;

wherein a form of said microspheres includes at least one of an expanded microballoon form and an unexpanded microsphere form;

wherein said microspheres have a predetermined microsphere concentration in said uncured formulation; and

wherein in addition to said microspheres, said uncured formulation includes solid filler particles.

42. The elastically deformable fusing-station member of Claim 41, wherein coated on said resilient layer is a protective layer comprising a fluoropolymer.

43. A method of making a fusing-station member for use in a fusing station of an electrostatographic machine, said fusing-station member formed from a substrate and a resilient layer adhered to said substrate, said method comprising the steps of:

mixing of ingredients so as to produce an uncured formulation, said ingredients including: particles of a copolymer of vinylidene fluoride, hexafluoropropylene and tetrafluoroethylene, a curing catalyst, microsphere particles, strength-enhancing solid filler particles, and thermal-conductivity-enhancing solid filler particles, wherein said microsphere particles have a concentration in said uncured formulation of about 0.25% - 4% by weight;

forming on said substrate a curable layer of said uncured formulation, said curable layer formed with a substantially uniform thickness on said substrate; and

curing of said curable layer to form a cured layer on said substrate.

44. The method of Claim 43, wherein:

said forming is carried out by a technique included in a group of techniques, said group of techniques including extruding, blade coating, compression molding, and injection molding.

45. The method of Claim 44, wherein:

said technique is said extruding;

a temperature of said uncured formulation during said extruding is in a range of approximately between 80°C - 130°C; and

a temperature of said core member during said extruding is any suitable temperature.

46. The method of Claim 43, wherein:

said curing of said curable layer is a thermal curing at an elevated temperature, said elevated temperature in a range between approximately 150°C - 260°C; and

after said thermal curing of said curable layer, an additional step of cooling said cured layer on said substrate to room temperature.

47. The method of Claim 43, wherein said microsphere particles are unexpanded microspheres, said unexpanded microspheres expanded to microballoons during said thermal curing.

48. The method of Claim 43, wherein said microsphere particles in said uncured formulation are expanded microballoons.

49. The method of Claim 43, wherein said curing of said curable layer is electron-beam curing.

50. The method of Claim 43, including an additional step of:

forming on said cured layer an outer layer, said outer layer comprising a fluoropolymeric material including filler particles, said outer layer made from one of a group of fluoropolymers including: fluoro-thermoplastic polymers, fluoroelastomers, and polytrafluoroethylene.